(54) Title: EFFICIENT SUPPORT FOR VP/VC GROUPS
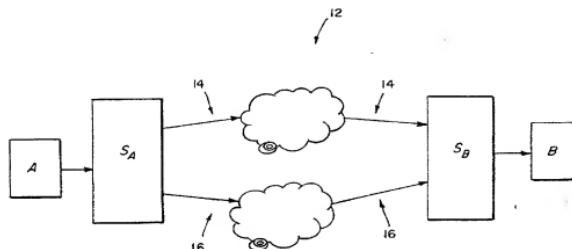
(57) Abstract: A method for supporting VP/VC groups in asynchronous transfer mode (ATM) switching systems (12) that implement ATM automatic protection switching (APS). A source (SA) transmits traffic substantially continuously on two paths (14, 16) and a destination (SB), or sink, selects at any time one of the traffic from only one of the paths (14, 16) for further processing. The method includes creating a groups table having an entry for each of the two instances of every active VP/VC group's member set. Each entry indicates whether the cells for that instance of that VP/VC group should be forwarded or discarded. Each entry references a corresponding entry in the groups table by means of a pointer. The method includes accessing a relevant entry in the groups table when a cell for that circuit arrives, discarding the cell if the accessed value is "discard", forwarding the cell as specified in the specific lookup table entry for that circuit if the accessed value is otherwise. Protection switching for a group requires only changing the value of the corresponding two entries in the groups table, a single operation regardless of the number of member circuits in the group.